



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

**75 Hawthorne Street
San Francisco, CA 94105**

Via Electronic Mail and U.S. Postal Service Mail
Certified Mail Receipt No. 7008 1830 0002 6279 5264

November 15, 2010

Mark J. Sedlacek, P.E.
Director of Environmental Services
Los Angeles Department of Water and Power
111 North Hope Street, Box 5111
Los Angeles, California 90051-0100

Re: Polychlorinated Biphenyls (PCBs) Under Toxic Substances Control Act – USEPA Conditional Approval Under 40 CFR 761.61(c) of Risk-Based PCB Cleanup Application¹ Dated April 2010 for Los Angeles Department of Water and Power (LADWP) Main Street Center Building 11, 1630 North Main Street, Los Angeles, California

Dear Mark J. Sedlacek:

The U.S. Environmental Protection Agency Region 9 (USEPA) hereby approves with conditions the above referenced LADWP risk-based disposal approval application (Application) for cleanup of polychlorinated biphenyls (PCBs) at the Former Transformer Warehouse (Building 11) at 1630 North Main Street, Los Angeles, California dated April 2010. USEPA received the Application on June 29, 2010 which was submitted under 40 CFR 761.61(c) (risk-based disposal approval application). Section C of the enclosure contains the conditions of approval.

The current land use for the Main Street Center Facility where Building 11 is located is industrial and according to LADWP the future land use will remain industrial. However, LADWP plans to renovate the Building for use as office space after abating the PCBs inside the Building and demonstrating that indoor air levels of PCB Aroclors do not exceed a risk-based performance standard that USEPA is currently developing. USEPA will make this standard available in advance to indoor air sampling.

USEPA believes the PCB cleanup plan proposed in the Application will result in no risk of injury to health and the environment if (1) the cleanup and required post cleanup, preoccupancy, and post occupancy requirements are implemented consistent with the attached USEPA October 28, 2009 strategy and the Application, both as modified by the conditions of approval; (2) an indoor air risk-based performance standard for PCB Aroclors is achieved pre and post occupancy of Building 11; and (3) appropriate worker protection measures are implemented during the PCB cleanup.

¹ "Revised Work Plan for Risk-Based Polychlorinated Biphenyls Cleanup (Notification and Certification Report) And Soil, Soil Gas, Groundwater, and Health Risk Assessment Main Street Center Transformer Warehouse, Building 11, 1630 North Main Street, Los Angeles, California," dated April 2010 and prepared by Los Angeles Department of Water and Power (LADWP) and Tetra Tech, Inc. (Application)

Mark J Sedlacek
Re: USEPA Conditional Approval – TSCA PCB Cleanup
Former Transformer Warehouse Building 11, North Main Street Center
Date: November 15, 2010

The LADWP Application is modified by the conditions of approval and some of the modifications include:

- Achieving an indoor air performance standard for PCB Aroclors inside Building 11 that USEPA is currently developing and likely to differ from the standard in USEPA's October 2009 Strategy. Pre and post occupancy indoor air sampling must demonstrate effectiveness of the PCB cleanup and encapsulation of residual PCBs in porous surfaces inside the Building by achieving the performance standard.
- Conducting limited outdoor air sampling in tandem with the indoor air sampling.
- Achieving a 2 ug/100 cm² PCB performance standard for wipe samples collected from encapsulated surfaces in Building 11 to demonstrate effectiveness of the encapsulant.
- Submitting a sampling and analysis plan for USEPA approval.
- Recordation of a deed notice in accordance with California State law.

This conditional approval applies only to the cleanup of PCBs inside Building 11 including implementation of indoor air sampling and disposal of PCB wastes associated with this cleanup. This approval does not address the Building 11 exterior. If PCBs are found to be present in other areas or buildings within the Main Street Center Facility, this approval does not cover cleanup of those PCBs. In addition, this approval does not address cleanup of other contaminants (e.g., lead) present in Building 11. The Department of Toxic Substances Control (DTSC) is addressing non-PCB contaminants in Building 11 and it is overseeing the site-wide corrective action cleanup at LADWP's Facility.

We look forward to be of assistance during LADWP's implementation of the approved PCB risk-based Application as modified by the conditions of approval. Please call Carmen D. Santos at 415.972.3360 if you have any questions concerning this conditional approval.

Sincerely,


for Jeff Scott, Director
Waste Management Division

Enclosures (2)

Cc: Juli Propes, California DTSC
Dat Quach, LADWP
Kelvin Lew, LADWP
Steve Armann, USEPA R9
Carmen Santos, USEPA R9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105

November 15, 2010

USEPA Conditional Approval for Los Angeles Department of Water and Power North Main Street Center Former Transformer Warehouse (Building 11) TSCA PCB Risk-Based Cleanup Under 40 CFR 761.61(c)

A. Introduction

The U.S. Environmental Protection Agency Region 9 (USEPA) hereby approves with conditions the "*Revised Work Plan for Risk-Based Polychlorinated Biphenyls Cleanup (Notification and Certification Report)*. . ." dated April 2010 (Application)¹ for cleanup of polychlorinated biphenyls (PCBs) inside the Los Angeles Department of Water and Power (LADWP) Former Transformer Warehouse (Building 11). This approval is effective on the date of this enclosure. Section C below contains the conditions of approval.

The Former Transformer Warehouse (Building 11) is located at 1630 North Main Street, Los Angeles, California.

In brief, this approval requires cleanup of PCBs in accordance with the risk-based disposal approval requirements of the Toxic Substances Control Act (TSCA) regulations in 40 CFR 761.61(c). This approval requires encapsulation of residual PCBs that may remain above the cleanup level for porous surfaces (e.g., concrete, brick) of 1 mg/kg and indoor air sampling to demonstrate the effectiveness of the cleanup and encapsulation measures.

B. Former Transformer Warehouse (Building 11) Land Use and LADWP's Proposed Risk-Based PCB Cleanup Plan

The current land use for the Main Street Center Facility (Facility) where Building 11 is located is industrial and according to LADWP the future land use will remain industrial. However, LADWP plans to renovate Building 11 (Building) for use as office space after abating the PCBs inside the building and demonstrating that indoor air concentration for PCB Aroclors do not exceed a risk-based performance standard to be established by USEPA.

In addition to Building 11, the Facility includes warehouses, machine shops, automotive shop, a former hazardous waste storage facility, parking, and a Former Manufactured Gas Plant. Building 11, which was historically used as a transformer warehouse, was constructed in 1927 and consists of a basement and two stories. After completing the PCB cleanup and demonstrating that risk-based PCB indoor air levels (in vapor and particulates) have been achieved inside the Building, LADWP plans to renovate Building 11 as office space. Building 11 has a total surface of 36,000 square feet.

¹ "*Revised Work Plan for Risk-Based Polychlorinated Biphenyls Cleanup (Notification and Certification Report) And Soil, Soil Gas, Groundwater, and Health Risk Assessment Main Street Center Transformer Warehouse, Building 11, 1630 North Main Street, Los Angeles, California,*" dated April 2010 and prepared by Los Angeles Department of Water and Power (LADWP) and Tetra Tech, Inc. (Application)

Potential sources of PCB contamination in Building 11 include transformer dielectric fluid, caulk or sealants containing PCBs, and lead-based paint also containing PCBs. If fluorescent light ballasts are present in Building 11, these may also be a potential source of PCB contamination, if such ballasts contain PCBs. Aroclors 1248 and 1260 are the predominant PCB Aroclors detected in concrete and interior masonry (brick) surfaces inside the Building.

The attached "USEPA Region 9 Comments and Recommendations on Two Draft LADWP Work Plans," dated October 28, 2009² includes the strategy that USEPA recommended be considered by LADWP to develop its Application. In general, LADWP's Application incorporates USEPA's recommended strategy.

USEPA believes the PCB cleanup proposed in the Application will result in no risk of injury to health and the environment if (1) the cleanup and required post cleanup, preoccupancy, and post occupancy requirements are implemented consistent with the attached USEPA October 28, 2009 strategy and the Application, both as modified by the conditions of approval; (2) an indoor air risk-based performance standard for PCB Aroclors is achieved pre and post occupancy of Building 11; and (3) appropriate worker protection measures are implemented during the PCB cleanup. USEPA is establishing an indoor air performance standard for Building 11 that may differ from that in USEPA's strategy.

Brief Description of Proposed PCB Cleanup as Modified by USEPA's Conditions of Approval

- Removal of PCBs from concrete walls and brick via wet-sand abrasion to less than or equal to 1 mg/kg; and removal of PCBs from concrete floors via scarification to less than or equal to 1 mg/kg.
- Cleanup verification sampling via concrete and brick core samples with cleanup level equal to or less than 1 mg/kg total PCBs. Appendix B in the Application will be followed to collect the samples.
- Application of encapsulant (epoxy coating) to porous surfaces (concrete walls and floor) subject to the PCB cleanup to encapsulate residual PCBs. Application of the M_L mark to the concrete floor.
- Measures to minimize dust during abrasion and scarification; and to protect workers. LADWP must ensure effective worker protection during all PCB cleanup activities.
- Construction of a physical barrier in the form of a raised floor above the concrete floor to prevent damage to epoxy coating applied to the floor.
- A 2 ug/100 cm² PCB performance standard for wipe samples collected from encapsulated surfaces in Building 11 to demonstrate effectiveness of the encapsulant.
- PCB waste disposal.
- Post cleanup, preoccupancy, and post-occupancy indoor air sampling (in tandem with limited outdoor air sampling) to demonstrate that indoor air levels of PCBs in Building 11 do not exceed a risk-based performance standard for PCB Aroclors to be established by USEPA.
- PCB Cleanup Report for USEPA approval.
- Routine inspection, maintenance, and repair of encapsulant applied to porous surfaces and reporting of findings to USEPA.
- Deed Notice.

² The California Department of Toxic Substances Control (DTSC) transmitted the October 28, 2009 "USEPA Region 9 Comments and Recommendations on Two Draft LADWP Work Plans" to LADWP in its November 3, 2009 letter addressed to Mr. Mark J. Sedlacek (Subject: City of Los Angeles Department of Water and Power, Main Street Center . . .").

C. USEPA's Conditions of Approval

This conditional approval does not relieve the owner, Los Angeles Department of Water and Power, from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and / or an enforcement action. Nothing in this approval bars USEPA from imposing penalties for violations of this approval or for violations of other applicable TSCA PCB requirements or for activities not covered under this approval.

This approval only applies to the interior of Building 11. USEPA reserves the right to require additional characterization and / or cleanup of PCBs at Building 11 if new information shows that PCBs remain in Building 11 above the approved PCB cleanup levels and / or above risk-based indoor air performance standard for PCB Aroclors; or if PCBs are found at other areas of the Main Street Center Facility.

USEPA is hereby approving the LADWP Application as modified by the following conditions of approval and LADWP must implement the Application as modified by those conditions. See also Section B above.

1. **PCB Cleanup Level for Porous Surfaces. Indoor Air Performance Standard to Confirm Cleanup Effectiveness.** The cleanup level for porous surfaces (e.g., concrete and brick inside Building 11) is equal to or less than 1 mg/kg total PCBs.

In its October 28, 2009 Strategy, USEPA presented a risk-based performance standard for PCB Aroclors equal to a concentration range of 4.3 to 430 ng/m³ total PCB Aroclors. This concentration range equates to the acceptable carcinogenic risk range of 1×10^{-6} (4.3 ng/m³) to 1×10^{-4} (430 ng/m³). After further evaluating the performance standard presented in its Strategy, USEPA is revisiting this indoor air risk-based performance standard and will establish a performance standard that is consistent with nationwide risk-based standards for PCBs in indoor air.

The effectiveness of the PCB cleanup and encapsulation of residual PCBs inside Building 11 will be evaluated via post cleanup, preoccupancy, and post-occupancy indoor air sampling. The continued effectiveness of residual PCB encapsulation inside Building 11 will be evaluated via routine indoor air sampling and wipe sampling during post occupancy as proposed in Sections 9.2 and 10 of the Application, respectively. LADWP must propose the number of outdoor air samples it will collect during post cleanup, preoccupancy, and post-occupancy of Building 11 in tandem with indoor air samples to determine if outside air is contributing PCBs into indoor air.

2. **LADWP Application, Section 9.1 ("Post-Cleanup Air Sampling"). Target PCB Indoor Air Concentration.** This Condition corrects the PCB indoor air risk-based performance standard presented in Section 9.1 of the Application. This standard is not 4.3 to 430 micrograms / cubic meter (ug/m³) PCB Aroclors. USEPA will establish a risk-based performance standard that will be communicated to LADWP in a separate letter. See Condition 1.
3. **Sampling and Analysis Plan (SAP).** Within 35 days after the date of this approval LADWP must submit a SAP that includes the following:

- a. A description of all samples to be collected under this approval.
 - b. A table summarizing the sample identification code, number of samples to be collected under Sections 5.1 ("Window Caulking Material Removal Procedure"), 6 ("Post PCB[s] Cleanup Confirmation Sampling of Concrete"), 9.1 ("Post-Cleanup Air Sampling"), and 9.2 ("Post-Occupancy Air Sampling"), location of samples referencing associated sample identification codes, sampling method, PCB extraction method, laboratory analysis method, quality assurance / quality control samples, and analytical detection limits.
 - c. Propose PCB Aroclor outdoor air samples to be collected in tandem with indoor air samples. Item 3.b. must include the same information for outdoor air samples.
 - d. The sampling grid that LADWP will use for collection of concrete and masonry (e.g., brick) core samples from walls and floors.
 - e. A description of quality assurance / quality control (QA / QC) procedures that will be implemented as well as QA / QC samples that will be collected.
 - f. For air sampling, the SAP must address the issues in Conditions 1, 4 through 9, and 12.
- 4. Post Cleanup, Preoccupancy, and Post-Occupancy Air Sampling for PCB Aroclors.** USEPA is requiring that a detection limit for PCBs that is 10% of the PCB Aroclor indoor air risk-based performance standard be established before collection and analysis of indoor air samples to ensure acceptable precision and accuracy at the concentration represented by the indoor air performance standard to be established by USEPA. LADWP must consult on this matter with its contract laboratory to verify that collection of indoor air samples via USEPA Method TO-10A will yield samples of sufficient volume to attain a low PCB detection limit.
- Alternatively, lower detection limits may be achieved by using USEPA Method TO-4A which is a higher air flow rate method compared to Method TO-10A. LADWP must confer with its contract laboratory on the use of Method TO-4A to analyze the indoor air samples if the required low analytical detection limits cannot be reliably achieved with Method TO-10A.
- 5. Building Conditions for Air Sampling.** Section 1.3 in LADWP's Application states "the entire building is not heated, ventilated, or air-conditioned." USEPA recommends the air samples should not be collected when the Building is cold or excessively warm. Within 35 days after the date of this approval, please explain how LADWP will maintain Building 11 at a temperature considered to be optimum for indoor air sampling. In addition, please verify if a ventilation system is likely to be installed in the Building before indoor air sampling is conducted and if so, what would be the ventilation system parameters (e.g., air flow, temperature) during air sampling.
- 6. Number and Location of Indoor Air Samples; and Quality Assurance (QA) / Quality Control (QC) Samples.** Within 35 days after the date of this approval, please provide the information described below in the SAP or as a separate deliverable.
- a. The rationale for the number of post cleanup, preoccupancy, and post-occupancy indoor air samples proposed for collection at each floor in Building 11.
 - b. Figures showing the location of post cleanup, preoccupancy, and post-occupancy indoor air samples.
 - c. The type and number of air QA / QC samples. See "Additional Requirements" below.
 - d. The methods to prevent breakthrough from the air filters. See "Additional Requirements" below.

Additional Requirements: USEPA is requiring the use of both field blank (unspiked) and field control (spiked) sampling filters to assess the background and recovery of PCBs. LADWP's contract laboratory must be the party that spikes the filters for recovery assessment. Additional QA/QC measures must be taken regardless of whether Method TO-10A or TO-4A is used. Method TO-10A suggests testing for breakthrough from the air filters by using a back-up filter in at least a subset of samples. We are requiring that such testing be performed regardless of sampling volume.

7. **Extraction and Analytical Methods.** Under the TSCA PCB regulations the applicant has the option to choose either the Soxhlet extraction method (USEPA Method 3540C) or the Ultrasonic method (USEPA Method 3550C). If the Ultrasonic method is chosen, please submit the laboratory's Standard Operating Procedure for our review within 35 days after the date of this approval. If necessary, post extraction and pre-analysis sample cleanup (e.g., USEPA Methods 3665A [sulfuric acid], 3620C [florisil column], 3640A [GPC]) procedures should be considered if matrix interferences are suspected that could increase analytical method detection limits and compromise comparisons of analytical results to cleanup and / or decontamination levels required in this approval.
8. **Measure of PCB Cleanup Effectiveness Based on Post Cleanup and Preoccupancy Indoor Air Samples.** The effectiveness of the PCB cleanup in the interior of Building 11 will be measured via post cleanup, preoccupancy, and post-occupancy indoor air sampling and comparison of those results to the PCB Aroclor indoor air risk-based performance standard. USEPA will establish this standard before LADWP conducts the post-cleanup indoor air sampling. Continued effectiveness of residual PCB encapsulation will be determined via results of post-occupancy indoor air sampling for PCB Aroclors and wipe samples from encapsulated surfaces. Limited outdoor air sampling must also be conducted for PCBs in tandem with post-cleanup, preoccupancy, and post-occupancy indoor air samples.
 - a. If PCB Aroclors are not detected or if detected inside Building 11 are equal to or less than the indoor air performance standard, the PCB cleanup is deemed effective.
 - b. If PCB Aroclors are detected in indoor air above the indoor air performance standard, LADWP must take additional measures to reduce PCB levels inside Building 11. After completing these measures, LADWP must collect indoor air samples to verify the effectiveness of additional measures in reducing indoor air PCB levels in the Building. If the analytical results for these samples show PCBs are detected at concentrations equal to or less than the performance standard, the additional measures have been effective in reducing PCBs in indoor air.

However, if the analysis results for indoor air samples collected to verify effectiveness of additional measures at Building 11 show that PCBs are above the performance standard, LADWP must implement further measures such as investigating and eliminating other potential sources (e.g., ventilation system ducts that need cleanup) of PCBs within the Building. Upon completion of these measures, LADWP must collect additional indoor air samples to demonstrate their effectiveness in reducing PCBs in indoor air equal to or below the performance standard. If analysis results for these indoor air samples show that PCBs are above the standard, LADWP must submit to USEPA an estimate of the potential risks associated with the PCB concentrations detected in indoor air and demonstrate the associated exposure does not result in a risk of injury to health and the environment.

- 9. Verification of Continued Effectiveness of Residual PCB Encapsulation Measures. Post-Occupancy Indoor Air Sampling.** LADWP will follow the approach in Condition 8 above and in Section 9.2 of the Application. USEPA will establish the indoor air performance standard before LADWP collects post cleanup indoor air samples. Wipe samples must be collected from encapsulated surfaces to demonstrate residual PCBs are not breaching the encapsulant. Instead of hexane, isopropanol must be used as the solvent for the wipes. Methanol may be used as an alternative. See also Condition 12.
- 10. PCB Waste Disposal.** Spent abrasive material containing PCB contaminated paint and/or concrete and PCB-contaminated concrete must be disposed of as PCB remediation waste in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B). Caulking material with PCBs above 50 mg/kg must be disposed as PCB bulk product waste in accordance with the disposal requirements in 40 CFR 761.62. Caulk or sealant containing PCBs below 50 mg/kg may be regulated for disposal as a hazardous waste in accordance with California state hazardous waste regulations. Disposal of water associated with the PCB cleanup must be consistent with the requirements in 40 CFR 761.61(a)(5)(iv). Disposal of all wastes (e.g., PCB containing caulk, personal protective equipment) generated during cleanup of PCBs in Building 11 must be in compliance with all applicable federal, state, and local regulations.
- 11. Decontamination of Sampling Tools and Equipment.** Decontamination of sampling tools and equipment must be conducted in accordance with the self-implementing decontamination procedures in 40 CFR 761.79(c). Disposal of decontamination waste and residues must be consistent with the requirements in 40 CFR 761.79(g).
- 12. Post-Occupancy Air Sampling Plan and Surface Inspection, Maintenance, and Repair Plan.** Condition 12 modifies Sections 9.2 (Post-Occupancy Air Sampling) and 10 (Surface Inspection and Maintenance Plan) of the Application. Post-occupancy indoor and outdoor air sampling procedures must be included in the SAP required in Condition 3 of this approval including the rationale for number and frequency of samples.

In reference to Section 10, within 35 days after the date of this approval, please submit a description of the procedures to remove the epoxy coating if PCBs are detected in the coating. USEPA is establishing a performance standard of 2 ug/100 cm² for PCBs in connection with the epoxy coating. PCBs in wipe samples collected from the coated floor are not to exceed 2 ug/100 cm². USEPA may revise this performance standard for the epoxy coating in the future depending on the results of research that USEPA national laboratories are conducting on encapsulants for PCBs. Instead of hexane, isopropanol must be used as the solvent for the wipes. Methanol may be used as an alternative. See also Condition 9.

In addition, USEPA is requiring annual reporting of inspection, maintenance, and repairs activities described in Item 8 in Section 10.
- 13. Deed Notice.** Within 120 days after completing the preoccupancy indoor air sampling (including reference outdoor air samples) in Building 11, the LADWP must record in accordance with State law a notation on the deed to the property or any other instrument that would be subject to review during a title search that will in perpetuity notify any potential buyer of the property:

- a. That LADWPs "*Revised Work Plan for Risk-Based Polychlorinated Biphenyls Cleanup (Notification and Certification Report) And Soil, Soil Gas, Groundwater, and Health Risk Assessment Main Street Center Transformer Warehouse, Building 11, 1630 North Main Street, Los Angeles, California,*" dated April 2010 and prepared by LADWP and Tetra Tech, Inc. (Application) was approved with conditions by USEPA on November 10, 2010 and cleanup of PCBs was conducted in accordance with the approved Application.
- b. The USEPA November 10, 2010 letter conditionally approving LADWP Application.
- c. The PCB concentrations remaining in Building 11 consistent with the Application as modified by USEPA's conditional approval.
- d. The epoxy coating applied to surfaces inside Building 11 and USEPA required inspection, maintenance, and repair of the epoxy coated surfaces in accordance with the Application as modified by USEPA's conditional approval.
- e. The post-occupancy indoor air sampling that will be conducted in accordance with the Application as modified by USEPA's conditional approval.
- f. The notification to employees in Building 11 about residual PCBs inside the Building.

LADWP must submit a certification to USEPA, signed by the owner, demonstrating the owner has recorded the deed notice required in this Condition of approval.

D. Not Covered by this Approval

1. **Health and Safety Plan.** USEPA acknowledges that a Health and Safety Plan (HSP) is included in the Application. This approval does not cover approval of the HSP as the approval of an HSP is outside the scope of our typical TSCA approvals.
2. **Cleanup of Building 11 Exterior.** This approval does not address cleanup of the exterior of Building 11 for PCBs. We recommend that LADWP ensure PCBs are not present in the exterior of Building 11 and if present that USEPA be contacted to determine if a TSCA cleanup would be applicable.
3. **Non-PCB Contaminants.** This approval does not address cleanup of other contaminants (e.g., lead) present in Building 11.



USEPA Region 9
Comments and Recommendations on Two Draft LADWP Work Plans
October 28, 2009

Introduction

U.S. EPA Region 9 (USEPA R9) has reviewed the following documents prepared by the Los Angeles Department of Water and Power (LADWP) and submitted to the California Department of Toxic Substances Control on LADWP's proposed cleanup of Building 11:

- A. *"Lead-Based Paint Removal, Lead Dust and Polychlorinated Biphenyls (PCB) Interior Surface Decontamination and PCB Management (for Continued Use) Work Plan per 40 CFR 761.61(c) Main Street Center Transformer Warehouse, Building 11, 1630 North Main Street, Los Angeles, California,"* prepared by LADWP, Draft, September 2009 (Draft Building 11 PCB Plan) (*updating earlier June 1, 2009 version*); **and**
- B. *"Draft Soil, Soil Gas, Groundwater, and Human Health Investigation Work Plan Building 11 Main Street Center Transformer Warehouse, 1630 North Main Street, Los Angeles, California,"* prepared by Tetra Tech, Inc. for LADWP, dated July 9, 2009 (Draft Investigation Work Plan)

USEPA is providing comments and recommendations on LADWP's proposed cleanup of Building 11 involving polychlorinated biphenyls (PCBs) and other substances regulated by the Toxic Substances Control Act (TSCA). USEPA R9 is only addressing PCB contamination issues associated with Building 11 in accordance with the TSCA regulations in 40 CFR Part 761.

The September, 2009, Draft Building 11 PCB Plan cites to 40 CFR § 761.61(c), which is the TSCA regulations' provision for a risk-based disposal approval. An earlier June 1, 2009 version of the Draft Building 11 PCB Plan stated an intent to submit to USEPA R9 a work plan pursuant to the TSCA self-implementing cleanup procedures pursuant to 40 CFR § 761.61(a). USEPA R9 reviewed the LAWP draft documents with the understanding that the September, 2009 Draft Building 11 PCB Plan reflects the current intent of LAWP to pursue a risk-based approval strategy.

No person may conduct cleanup activities under section 761.61(c) prior to obtaining written approval from USEPA R9. See 40 CFR § 761.61(c)(1). If LADWP wishes to sample, cleanup, or dispose of PCB remediation waste pursuant to a section 761.61(c) risk-based disposal approval, LADWP must apply in writing to USEPA R9 by submitting an application which includes the information described in section 761.61(a)(3) of the TSCA regulations. See 40 CFR § 761.61(a)(3). Even after such an application is submitted, USEPA R9 may request other information that it believes necessary to evaluate the

application. USEPA R9 issues a written decision on each application for a section 761.61(c) risk-based disposal approval.

LADWP has not submitted an application to USEPA R9 for risk-based approval pursuant to 40 CFR § 761.61(c) or to fulfill the notification requirements of the self-implementing cleanup procedures set out at 40 CFR § 761.61(a). Further, the Draft Building 11 PCB Plan and the Draft Investigation Work Plan do not currently meet all the regulatory requirements for a risk-based disposal approval application under 40 CFR § 761.61(c). See discussion below. The USEPA R9 comments conveyed herein are thus *not* USEPA R9 action on an application for a risk-based approval or a self-implementing cleanup. We hope that providing this early feedback will facilitate submission of a complete application. LADWP must still submit to USEPA R9 an application which includes the information described in section 761.61(a)(3) of the TSCA regulations and obtain written approval from USEPA R9 prior to conducting cleanup activities under section 761.61(c).

According to the Draft Building 11 PCB Plan, the LADWP plans on reusing Building 11 (a former transformer warehouse) as office space. The Draft Investigation Work Plan also states (at page 3) that LADWP is interested in determining the feasibility of utilizing Building 11 for a public educational research center. Pre-characterization sampling and analysis of certain building materials have shown that PCBs are present throughout the building at various concentrations. Building 11 was constructed in the 1930s and consists of three floors: a basement and Floors 1 and 2. Building 11 is categorized as a historical building.

PCBs have been detected inside Building 11 in concrete, paint, and caulk. Lead and asbestos are also present. The PCB-containing paint is a lead-based paint with lead concentrations up to 500,000 mg / kg (ppm) and PCB concentrations ranging from 0.2 to 164 mg / kg. USEPA R9 is not aware of how many samples were collected to determine the range concentration of PCBs in paint and caulk. The sufficiency of PCB data related to Building 11 has not been assessed. Building 11 is roughly 36,000 square feet (sq.ft).

USEPA R9 Comments and Recommendations

Los Angeles Department of Water and Power

A. “Lead-Based Paint Removal, Lead Dust and Polychlorinated Biphenyls (PCB) Interior Surface Decontamination and PCB Management (for Continued Use) Work Plan per 40 CFR § 761.61(c) Main Street Center Transformer Warehouse, Building 11, 1630 North Main Street, Los Angeles, California,” prepared by LADWP, Draft, September 2009 (Draft Building 11 PCB Plan)

1. Applicability of 40 CFR § 761.30(p) (Continued use of porous surfaces contaminated with PCBs regulated for disposal by spills of liquid PCBs). USEPA R9 understands that LADWP proposes to decontaminate the interior surfaces of Building 11 in accordance with 40 CFR § 761.30(p) to enable the use of this building as office space. See Draft Building 11 PCB Plan (September 2009 version) at pages 2-6 and 4-8.

The regulation in 40 CFR § 761.30(p), which is a continued use authorization based on meeting the specific conditions described in this regulation, is generally not applicable to cleanup and decontamination of PCBs in Building 11. Among other conditions, this regulation prohibits a change in the current use of porous surfaces contaminated with PCBs. See 40 CFR § 761.30(p)(2). See also USEPA's Polychlorinated Biphenyl (PCB) Site Revitalization Guidance at page 12 and examples at pages 23-26. Building 11 is a transformer warehouse that apparently had very limited office space and LADWP plans on using the building for office space or possibly a public educational research center. The building will no longer be used as a transformer warehouse.

In addition, one of the requirements in 40 CFR § 761.30 (p) is the marking of the PCB-contaminated surfaces with the M_L mark in a location easily visible to individuals present in the area regardless of the surface being the original surface or a barrier fastened to the original contaminated surface. The text for this marking is in 40 CFR § 761.45. Reference to section 761.30(p) in LADWP's Draft Building 11 PCB Plan does not seem to be contemplating use of this mark in a location easily visible to individuals present in the area. See September 2009 version at page 2-6.

LADWP should conduct cleanup and decontamination of PCBs either under 40 CFR § 761.61(a) (self-implementing on-site cleanup and disposal of PCB remediation waste) or 40 CFR § 761.61(c) (risk-based disposal approval). If LADWP wishes to utilize some of the decontamination and sealing methods called out in section 761.30(p), USEPA R9 recommends that LADWP describe the procedures it wishes to utilize rather than cutting short such a description by citing to a regulation.

The regulations in 40 CFR § 761.61(a) prescribe cleanup levels for PCB remediation wastes such as bulk PCB remediation waste (e.g., soils), porous surfaces (e.g., concrete), and cleanup wastes (e.g., personal protective equipment, spent non-liquid cleaning materials), and non-porous surfaces (e.g., metal). At its discretion, USEPA R9 can require more stringent cleanup levels under 40 CFR § 761.61(a) under certain circumstances.

Under 40 CFR § 761.61(c), cleanup, sampling, or disposal of PCB remediation waste can be conducted in a different manner as required under 40 CFR § 761.61(a). Based on the Draft Building 11 PCB Plan, we understand that LADWP intends to conduct a risk-based cleanup for PCBs in accordance with 40 CFR § 761.61(c) requirements. Please refer to Comment 2 below.

2. Risk-based disposal approval application for PCBs in accordance with 40 CFR § 761.61(c). The Draft PCB Plan does not meet the regulatory requirements for a risk-based disposal approval application under 40 CFR § 761.61(c). Please submit an application for USEPA R9 approval that includes and responds to all the requirements in 40 CFR § 761.61(a)(3)(i) and the risk evaluation required in 761.61(c). This application must include PCB cleanup verification. LADWP should propose the number of concrete core samples and indoor air samples that it will collect to verify effectiveness of the PCB cleanup.

The LADWP risk-based disposal approval application should propose site-specific risk-based PCB concentrations for porous and non-porous surfaces in Building 11. We note that instead of this, Section 1.3 (Work Plan Objectives) of the Draft Building 11 PCB Plan refers to "USEPA's PCB clearance level of 10 ug / 100 cm²." There is not such thing as a "clearance level" under TSCA; and the 10 ug / 100 cm² decontamination standard for concrete does not apply to the LADWP situation. This standard applies when decontamination of concrete contaminated by spills of liquid PCBs is commenced within 72 hours or less from the time the spill occurred. See 40 CFR §761.79(b)(4).

Instead of the approach proposed for the PCB cleanup of porous surfaces in the Draft PCB Plan, USEPA R9 recommends that LADWP seriously consider the strategy described below. We developed this strategy with assistance from Dr. Patrick Wilson, our Senior Regional Toxicologist. In addition, we understand that washing the floors and walls as well as other surfaces in the building is still necessary due to the removal of lead-based paint containing PCBs.

Porous Surfaces – concrete floors and walls

(a) Concrete floor cleanup. We recommend that an abrasive be used to cleanup PCB contamination from concrete floors instead of the method proposed in the Draft PCB Plan due to the age of the PCB spills that contaminated the floors. Upon completing cleanup of the floor, concrete core samples must be collected to determine the residual PCB concentrations remaining in concrete floors. Together with other facts, this information should be used in preparing a deed notice for Building 11. Standard wipe samples may be collected in tandem with bulk concrete samples to get an indication of PCB concentrations on the immediate concrete surface and to verify the PCB concentrations remaining in the concrete matrix after cleanup, respectively.

PCB concentrations remaining in concrete should not exceed an average concentration of 1 mg / kg PCBs as measured by collection and analysis of concrete core samples. If necessary, a second round of cleanup should be conducted to meet the cleanup level for concrete. We acknowledge the possibility of PCBs remaining at concentrations above 1 mg / kg in certain locations in the concrete floors after a second round of cleanup has been conducted. Because of the likelihood for this to occur, the effectiveness of the PCB cleanup will be measured by indoor air sampling. Please refer to Item (c) below.

The two-layer epoxy coating should be applied before LADWP conducts the indoor air sampling required in Item (c). In addition, Item (c) requires that LADWP propose the number of indoor air samples that will be collected for analysis of PCB Aroclors.

If an abrasive is used to cleanup the floor, the spent abrasive together with removed concrete particles must be disposed as PCB remediation waste in accordance with 40 CFR § 761.61(a)(5)(v).

We recommend the PCB cleanup be conducted in a manner that generates the least amount of wastes and that is energy efficient and cost effective. Disposal costs and transportation of non-liquid cleanup materials should be considered in comparison and

contrast to transportation of and cost of incineration for liquid cleanup wastes. Please refer to the attached "*Greener Cleanups Policy – EPA Region 9*" for information on aspects of greener cleanups that may apply to the PCB cleanup in Building 11.

(b) Concrete walls cleanup. We recommend that an abrasive be used to remove PCB-containing lead-based paint and that concrete core samples be collected from the concrete walls to verify the PCB concentrations that may remain in place.

The Draft PCB Plan proposes to use wet sand. At another site where PCBs were present in paint the responsible party used Sponge-Jet Red Sponge Media to remove the PCB-containing paint. We do not know if this type of abrasive would be acceptable for removal of paint that contains lead in addition to PCBs. We understand that the State of California has a lead certification program and that lead paint removal must be done following specific guidelines established by the State. Our comments regarding removal of the paint is merely in context to PCBs in paint.

PCB concentrations remaining in concrete should not exceed an average concentration of 1 mg / kg PCBs as measured by collection and analysis of concrete core samples. If necessary, a second round of cleanup should be conducted to meet the cleanup level for concrete. LADWP can utilize the procedures in 40 CFR § 761 Subpart O to determine the number of concrete core samples that it will propose to verify PCB concentrations remaining in the concrete walls. The effectiveness of the PCB cleanup will be measured by indoor air monitoring. Please refer to Item (c) below.

The spent abrasive containing PCB-containing lead-based paint chips and concrete particles must be disposed offsite as PCB bulk product waste in accordance with 40 CFR § 761.62.

(c) Post cleanup and preoccupancy air sampling to assess effectiveness of the PCB cleanup. Upon completing the removal of PCB-containing lead-based paint, PCBs on the concrete floors (as feasible), PCB-containing sealants (e.g., caulk), and other PCB impacted building materials, USEPA R9 recommends that LADWP conduct indoor air sampling for PCB Aroclors. Before conducting air sampling, LADWP should apply a double coat of solvent resistant and water repellent coatings of contrasting color to the concrete floors. A solvent resistant and water repellent coating should be applied to the walls. Indoor air sampling should be conducted in the basement and Floors 1 and 2.

Indoor air sampling and analysis should be conducted following USEPA Method TO-10A. LADWP should propose a method to determine PCB concentrations in air dust inside the basement and Floors 1 and 2. The indoor air sampling to make this determination should be conducted after completion of cleanup and sealing of all surfaces and concurrently with the sampling to be conducted using USEPA Method TO-10A. LADWP must propose the number of indoor air samples to be collected and analyzed for PCB Aroclors.

If PCB Aroclors are not detected, or if detected are within or below the 4.3 to 430 ng / m³ range, the PCB cleanup is deemed effective.

If PCB Aroclors are detected in indoor air above the 4.3 to 430 ng / m³ range, LADWP must take additional measures such as repeating the rinsing of concrete floors and walls to further remove dust to reduce PCB levels inside Building 11. After completing these measures, LADWP must collect indoor air samples to verify the effectiveness of additional measures in reducing PCBs in indoor air at Building 11. If PCBs are not detected or if detected are within or below the targeted range of 4.3 to 430 ng / m³, the additional measures have been effective in reducing PCBs in indoor air.

If indoor air samples in Building 11 show that PCBs are above the targeted range, LADWP must implement further measures such as investigating and eliminating other potential sources (e.g., ventilation system ducts that need cleanup) of PCBs within the building. Upon completion of these measures, LADWP must collect additional indoor air samples to demonstrate their effectiveness in reducing PCBs in indoor air to below or within the targeted range.

(d) Post occupancy air sampling to verify continued effectiveness of PCB cleanup.

For the first two years after building occupancy, LADWP should conduct indoor air sampling on each floor (including the basement) of Building 11. LADWP is to propose the location and number of air samples to be collected and frequency (e.g., an x number of air samples per floor twice a year). The samples should be analyzed for PCB Aroclors.

Other Porous Surfaces

If other porous surfaces (e.g., brick, masonry) different from concrete are impacted with PCBs and such surfaces are to remain in the building, LADWP should propose and describe in the cleanup plan the procedures it will undertake to cleanup or remove PCBs from these surfaces.

Non-Porous Surfaces

If non-porous surfaces in the building are impacted with PCBs and such surfaces are to remain in the building, LADWP should propose and describe in the cleanup plan the procedures it will undertake to cleanup or remove PCBs from these surfaces.

3. Floor sequestration (Section 2.5, Draft PCB Plan). LADWP must propose an inspection plan that covers inspection, maintenance, and repair of the dual epoxy coating and the M_L mark. This plan should include an inspection schedule to ensure the integrity of the coating and M_L mark are being maintained for the long term. The M_L mark that must be applied to the surface of the dual epoxy coating is described in 40 CFR § 761.45. Standard wipe samples should be collected to determine if PCBs remaining in the concrete matrix are breaching the epoxy coating. The coating should be repaired when such a breach occurs and / or when the M_L mark shows signs of been worn out. The plan should also include recordkeeping activities associated with the epoxy coating and M_L mark inspection, maintenance, and repair. After USEPA R9 grants approval for a risk-based cleanup pursuant to 40 CFR § 761.61(c), the raised floor would not need to be marked with the M_L mark.

4. Disposal of lead and PCB contaminated materials (Section 3, Draft PCB Plan).

PCB bulk product waste including paint chips together with the abrasive used to remove the PCB-containing lead-based paint must be disposed offsite in accordance with the disposal requirements in 40 CFR § 761.62.

5. Cleanup wastes. Cleanup wastes such as spent abrasive together with removed concrete particles and personal protective equipment should be disposed offsite as PCB remediation waste in accordance with 40 CFR § 761.61(a)(5)(v).

B. *"Draft Soil, Soil Gas, Groundwater, and Human Health Investigation Work Plan Building 11 Main Street Center Transformer Warehouse, 1630 North Main Street, Los Angeles, California,"* prepared by Tetra Tech, Inc. for LADWP, dated July 9, 2009. (Draft Investigation Work Plan)

This Draft Investigation Work Plan states that eight borings will be drilled through the concrete slab in the basement of Building 11, in the manner specified in the Draft Work Plan. The proposed sampling locations are identified in Figure 2 of the Draft Work Plan. All of the proposed sampling locations are within the footprint of Building 11. The Draft Investigation Work Plan states that groundwater and soil samples will be analyzed for PCBs by USEPA Method 8082.

USEPA R9 Comments and Recommendations

1. Human Health Risk Assessment (Section 3.6, Draft Investigation Work Plan).

Section 3.6 of the Draft Investigation Work Plan does not appear to address polychlorinated biphenyls (PCBs). PCBs are present in the interior of Building 11. PCBs may also be present in the exterior of this building.

USEPA R9 recommends that soil investigations be conducted for PCBs beneath and at least three to six feet within the vicinity of Building 11 and the area perpendicular and immediately adjacent to this building. The investigation data as well as that data to be generated from the cleanup of PCBs in the interior of Building 11 (and possibly in the exterior Building 11) should be used in the health risk assessment.

2. Soil investigations for PCBs. As stated in Comment 1 above, USEPA R9 recommends that pre-cleanup soil characterization be conducted for PCBs beneath and at least three to six feet within the vicinity of Building 11 and the area perpendicular and immediately adjacent to this building. The soil investigations should enable an understanding of the nature and extent of PCB contamination if such contamination is present at the site. This investigation should be conducted following the requirements in 40 CFR 761.61(a)(2) and 40 CFR 761 Subpart N.

Alternatively, LADWP may propose investigation methods that it can demonstrate are equivalent to those in 40 CFR § 761 Subpart N. In addition, the investigation should yield sufficient data for LADWP to provide USEPA R9 with and to meet the regulatory requirements in 40 CFR 761.61(a)(3)(i) in its entirety.

3. Site and Building 11-related conceptual site model (CSM). USEPA R9 recommends that LADWP develop a comprehensive conceptual site model (CSM) relevant to PCB

impacted surfaces, materials, and media. This CSM should detail the mechanism by which receptor groups are exposed to PCB impacted materials and the potential pathways of these exposures. The CSM should also establish the linkage between the specific receptor exposure scenarios (industrial, occupational) and the mechanisms of the potential exposures. The CSM represents a useful tool to support the development of quantitative estimates of human exposure, which can then be combined with USEPA's toxicity criteria in arriving at estimates of health risks.